



**Department of  
Environmental Protection  
Bureau of Land & Water Quality February 2005  
O&M Newsletter**

**A monthly newsletter for wastewater discharge licensees, treatment facility operators, and associated persons**

## **Laboratory QA/QC Training**

If you are involved with laboratory work in your facility, you know that the DEP has been looking more closely at laboratory QA/QC. Last summer, JETCC sponsored a number of training sessions that were conducted by personnel from Katahdin Analytical Laboratories. Those of you who attended received a notebook containing the first draft of a manual that is a model for you to use to develop your own Lab QA/QC program. In December, a Compact Disk was sent out with a copy of the manual in electronic form and some other resources designed to help you develop your own manual.

Next month, JETCC will hold three training classes in Presque Isle, Brewer and Auburn, where DEP personnel and wastewater laboratory staff will work with you to help you learn how to use the materials on the CD and other resources to develop your own QA/QC manual and program. The class will have three tracks: (1) a computer track where you will learn how to use the CD on your computer; (2) a laboratory track where lab technicians from wastewater facilities will show how they developed their QA/QC programs; and, (3) a regulatory track where DEP personnel will discuss what DEP inspectors will be looking for when they review a facility's QA/QC program.

**We encourage anyone who works in a wastewater lab and who has any questions about the QA/QC program, the CD or any other relevant lab issues to attend one of the courses.**

*Dick Darling*

## **Approved Training**

February 16, 2005 in Brewer ME -  
Preparing for Laboratory Audits & How to  
Write Laboratory Standard Operating  
Procedures (SOPs) - Sponsored by WPETC  
- 207-761-2991 – Approved for 4 hours  
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February 10, 2005 in Portland ME –  
BEACH Program & Enterococci Testing -  
Sponsored by WPETC - 207-761-2991 –  
Approved for 5 hours  
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February 16, 2003 in Waterville, ME -  
Sanitary Sewer Overflows & CMOM -  
Sponsored by JETCC - 207-523-8020 –  
Approved for 6 hours  
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February 17, 2005 in Augusta ME – Fats,  
Oils & Grease (FOG): Management  
Strategies - Sponsored by WPETC - 207-  
761-2991 – Approved for 3 hours  
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February 23, 2005 in Caribou ME – GIS &  
Asset Management - Sponsored by WPETC  
- 207-761-2991 – Approved for 3 hours  
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February 24, 2005 in Portland ME –  
Biological Selectors - Sponsored by

WPETC - 207-761-2991 – Approved for 4 hours

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March 2, 2005 in Lewiston, ME –  
Programmable Logic Controllers without  
SCADA - Sponsored by MRWA - 207-729-  
6569 – Approved for 3.5 hours

March 3, 2005 in Augusta, ME - Motor  
System Management - Sponsored by JETCC  
- 207-523-8020 – Approved for 8 hours

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March 3, 2005 in Bangor, ME –  
Programmable Logic Controllers without  
SCADA - Sponsored by MRWA - 207-729-  
6569 – Approved for 3.5 hours

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March 8, 2005 in Presque Isle, ME -  
Understanding your Laboratory QA/QC CD  
- Sponsored by JETCC - 207-523-8020 –  
Approved for 6 hours

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March 9, 2005 in Brewer, ME -  
Understanding your Laboratory QA/QC CD  
- Sponsored by JETCC - 207-523-8020 –  
Approved for 6 hours

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March 9, 2005 in Gardiner, ME – Valves –  
Exercise & Maintenance Program -  
Sponsored by MRWA - 207-729-6569 –  
Approved for 3.5 hours

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March 16, 2005 in Presque Isle, ME -  
Centrifugal Pump Hydraulic Application -  
Sponsored by JETCC - 207-523-8020 –  
Approved for 6 hours

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March 16, 2005 in York, ME – Valves –  
Exercise & Maintenance Program -  
Sponsored by MRWA - 207-729-6569 –  
Approved for 3.5 hours

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March 23, 2005 in Presque Isle, ME –  
Valves – Exercise & Maintenance Program -  
Sponsored by MRWA - 207-729-6569 –  
Approved for 3.5 hours

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March 24, 2005 in Auburn, ME -  
Understanding your Laboratory QA/QC CD  
- Sponsored by JETCC - 207-523-8020 –  
Approved for 6 hours

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March 24, 2005 in Portland ME – Fats, Oils  
& Grease (FOG): Management Strategies -  
Sponsored by WPETC - 207-761-2991 –  
Approved for 3 hours

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March 30, 2005 in Rumford, ME – Tractor-  
Loader-Backhoe - Sponsored by MRWA -  
207-729-6569 – Approved for 5 hours

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March 31, 2005 in Gray, ME – Tractor-  
Loader-Backhoe - Sponsored by MRWA -  
207-729-6569 – Approved for 5 hours

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April 7 & 8, 2005 in Bangor, ME - Basic  
Microscopy & Filamentous Bacteria  
Identification - Sponsored by JETCC &  
NEIWPCC - 207-523-8020 – Approved for  
6 hours

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April 13, 2005 in Topsham ME –  
Wastewater Treatment: The Fundamentals -  
Sponsored by WPETC - 207-761-2991 –  
Approved for 6 hours

April 14, 2005 in Brewer ME – Lockout/  
Tagout & Confined Space Entry - Sponsored  
by WPETC - 207-761-2991 – Approved for  
5 hours

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April 21, 2005 in Augusta, ME - Tricks to  
By-Pass Pumping - Sponsored by JETCC -  
207-523-8020 – Approved for 6 hours

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April 24, 2005 in Topsham ME – Math for  
Wastewater Operators - Sponsored by  
WPETC - 207-761-2991 – Approved for 5  
hours

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April 27, 2005 in Orono, ME - Biological  
Process Control - Sponsored by JETCC -  
207-523-8020 – Approved for 6 hours

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April 27, 2005 in Old Town, ME– Tractor-Loader-Backhoe - Sponsored by MRWA - 207-729-6569 – Approved for 5 hours

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April 28, 2005 in Caribou, ME– Tractor-Loader-Backhoe - Sponsored by MRWA - 207-729-6569 – Approved for 5 hours

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April 28 & 29, 2005 in Portland- Advanced Activated Sludge - Sponsored by JETCC & NEIWPCC - 207-523-8020 – Approved for 12 hours

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May 3, 2005 in North Vassalboro, ME - Corrosion Management in Potable Waters: It's Not Just Water Chemistry - Sponsored by JETCC - 207-523-8020 – Approved for 3 hours

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May 3, 2005 in North Vassalboro, ME - Verifying the Water/Wastewater Treatment Processes - Sponsored by JETCC - 207-523-8020 – Approved for 3 hours

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May 4, 2005 in Kennebunkport, ME- Ten Best Kept Water & Wastewater Process Management Secrets - Sponsored by JETCC - 207-523-8020 – Approved for 6 hours

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Note:

WPETC stands for Wright Pierce Environmental Training Center.

JETCC stands for Joint Environmental Training Coordinating Committee

MRWA stands for Maine Rural Water Association

MWWCA stands for Maine Wastewater Control Association

NEIWPCC stands for New England Interstate Water Pollution Control Commission

### ***For Practice***

1. The term Chlorine Residual means
  - a. The chlorine remaining in the actual discharge to the receiving water.
  - b. The amount of chlorine offset by the addition of sodium bisulfite
  - c. The amount of chlorine added to achieve a certain concentration in the effluent before it goes to the contact tank.
  - d. The chlorine dosage required to kill all the coliform bacteria present.
2. Given the following data, how much sludge should be wasted?

Plant flow	750,000 gal./day
Current MLSS	2767 mg/L
Target MLSS	2500 mg/L
Aeration Tank Volume	250,000 gal.
RAS Concentration	7800 mg/L
Effluent TSS	15 mg/L

  - a. none
  - b. 2,196 gallons
  - c. 6,742 gallons
  - d. 8,558 gallons
3. One of the steps for proper maintenance of liquid or capillary thermometers is to check for
  - a. corrosion
  - b. loose connections
  - c. leaks
  - d. low fluid level
4. One of the best ways to motivate employees is to
  - a. Yell really loud.
  - b. Provide meaningful praise or criticism for each employee individually.
  - c. Make everyone do things your way.
  - d. Make motivational speeches at all staff meetings.

## Certification News

### Fall Exam 2004

Here are the statistics for the Fall Exam

	Test	Passed	Pass/Fail
Grade 1	19	13	68.4%
Grade 2	8	5	67.5%
Grade 3	10	7	70.0%
Grade 4	7	2	28.6%
Grade 5	6	1	16.7%
Grade 1 P/C	2	2	100.0%
Overall	52	30	57.7%

### Spring 2005 Exam

The Spring Wastewater Exam will be given in the usual locations on Wednesday, May 11, 2005. Applications must be postmarked on or before March 26, 2005 or hand delivered to the DEP on March 28, 2005.

### Answers to For Practice:

- a. The term Chlorine residual means the concentration of chlorine in the water actually discharged to the receiving stream, whether a dechlorinating agent like sodium bisulfite as been added or not.
- d. Pounds of Sludge to Waste =  $\frac{(\text{Actual MLSS} - \text{Target MLSS}) * \text{Aeration Basin Volume} * 8.34}{}$

Solve using the data given: Pounds To Waste =  $(2767 - 2500) * 0.13 \text{ MG} * 8.34 = 557 \text{ pounds}$

Determine the gallons to be wasted:  
Gallons wasted =  $\frac{(\text{pounds wasted} * 1,000,000)}{(\text{waste sludge concentration} * 8.34)}$

Gallons Wasted =  $\frac{(557 * 1,000,000)}{(7800 * 8.34)}$   
Gallons Wasted = 8,558 gallons

- c. Capillary thermometers should always be checked for leaks.
- b. A good way to motivate employees is to praise them publicly for a good job and criticize them privately for poor performance